

AIRCRAFT CONTROL SURFACE DRIVE SYSTEM AND ASSOCIATED  
METHODS

ABSTRACT OF THE DISCLOSURE

A control surface drive system having a plurality of actuator assemblies are coupled to first and second supply lines and to a return line. The first and second supply lines are connected to a source of hydraulic fluid. At least one of the actuator assemblies has a hydraulic actuator movably connectable to an aircraft control surface. A flow control assembly is connected to the return line and to at least one of the first and second supply lines. A bypass line is in fluid communication with the first and second supply lines and positioned to recycle the hydraulic fluid from one of the first and second supply lines back into the other one of the first and second supply lines when the hydraulic actuator moves toward the first position. A computer controller operatively interconnects the plurality of actuator assemblies and the flow control assembly. It is emphasized that this abstract is provided to comply with the rules requiring an abstract. It is submitted with the understanding that it will not be used to interpret or limit the scope or meaning of the claims (37 C.F.R. § 1.72(b)).